

Remarks

Claims 1-4, 19-22, 36 and 45 are presented for examination. All of the presented claims stand rejected. Claims 1, 19, 36, and 45 are currently amended. Reconsideration is respectfully requested.

As described in the Background of this application, it is common to utilize a plurality of servers in a server farm to accommodate a relatively large volume of client requests that would overload a single server. A typical technique for implementing the server farm is to use an intermediate device such as a content server re-maps requests and service/content communications between the client and the farm server. The content server is used because TCP/IP does not provide a mechanism for a client to directly address a server farm. The content server solves this problem by changing the address in packets such that it appears to be the farm server from the perspective of the client, and the client from the perspective of the farm server. For example, the client obtains the address of the content server from a domain name server (DNS), addresses a service request to the content server, the content server then re-addresses the request and sends it to a selected server from the farm. In response to the request (addressed from the content server), the farm server replies with service/content addressed to the content server, and the content server re-addresses the service/content and sends it to the client. Although the request is ultimately satisfied, using content servers adds cost and presents single point of failure and scalability problems. As described at page 9, line 11 through page 10, line 5, it is possible to obviate the need for re-mapping by a content server if a specialized DNS responds to the client request with the address of an actual server from the server farm, rather than an intermediate device such as the content server. The client and farm server can then communicate by using actual source and destination addresses, rather than relying on address re-

mapping by the content server. Note that the added cost, single failure point and scalability problems are mitigated as a result. The independent claims are currently amended to emphasize this distinguishing feature.

Claims 1-4, 19-22, 36 and 45 are rejected under 35 U.S.C. 103(a) as being obvious based on US 2001/0049741 (Skene) in view of US 2003/0135613 (Yoshida). Skene is cited as showing the steps associated with receiving the client request and returning an address to the client. Yoshida is cited selecting a server based on load balancing criteria. With regard to Skene, note that the virtual server array controller (SAC), as defined in [0026] and illustrated in Figure 1, is an intermediate device between client and virtual server that controls re-mapping of the client request in order to distribute connections across arrays of servers. As described in [0039], the SAC utilized “Wide ip” to map a domain name to a set of virtual servers. Further, as described in [0039], the Wide IP key is the IP address specified by the domain name’s “A” resource record in the zone file. It will therefore be appreciated that the SAC is analogous to the content server which represents one of the problems that the presently claimed invention helps to overcome. In particular, the presently claimed invention helps to avoid the re-mapping function of the SAC by having the DNS provide the client with the address of an actual server capable of responding to the request by providing a service or content. Yoshida teaches servers for monitoring operational status and load on other servers. However, the monitored servers described are not servers in a farm, but rather DNS/DAP server (4), NTS server (6), information server (20) and monitoring server (30). There is no suggestion that the DNS should provide the client with the address of one server from a server farm. Withdrawal of the rejections of claims 1, 19, 36, and 45 is therefore requested. The dependent claims further define the invention, and are allowable for the same reasons as their respective base claims.

Conclusion

Applicants have made a diligent effort to place the claims in condition for allowance. However, should there remain unresolved issues that require adverse action, it is respectfully requested that the Examiner telephone Applicants' Attorney at the number listed below so that such issues may be resolved as expeditiously as possible.

For these reasons, and in view of the above amendments, this application is now considered to be in condition for allowance and such action is earnestly solicited.

Respectfully Submitted,

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